AMENDMENTS TO THE CLAIMS

Please cancel claims 1-35. The pending claims are 36-52, which are reproduced below. These claims are not amended.

- 1-35. Cancelled
- 36. (Previously presented) A method of producing embryo-derived proliferating cells having human nuclear DNA and bovine-derived mitochondria, comprising the following steps.
 - (i) enucleating a bovine oocyte;
- (ii) inserting a human cell or cell nucleus into the bovine oocyte under conditions suitable for the formation of nuclear transfer unit;
 - (iii) activating the resultant nuclear transfer unit;
- (iv) culturing the activated nuclear transfer unit to obtain a nuclear transfer unit having at least 16 cells; and
- (v) culturing cells comprising the inner portion of the nuclear transfer unit of step (iv) in vitro to obtain cells proliferating as a colony.
- 37. (Previously presented) The method of Claim 36, wherein the human cell is an adult cell.
- 38. (Previously presented) The method of Claim 36, wherein the human cell is selected from the group consisting of epithelial, neural epidermal, karatinocyte, hematopoietic, melanocyte, mononuclear, fibroblast, cardiac muscle, and non-cardiac muscle cell.

- 39. (Previously presented) The method of Claim 36, wherein the human cell is an epithelial cell, lymphocyte or fibroblast.
- 40. (Previously presented) The method of Claim 36, wherein the enucleated bovine oocyte is matured prior to enucleation.
- 41. (Previously presented) The method of Claim 36, wherein step (ii) comprises inserting a human cell into the bovine oocyte, the method further comprising fusing the human cell and bovine oocyte.
- 42. (Previously presented) The of Claim 41, wherein fusion is effected by electrofusion.
- 43. (Previously presented) The method of Claim 36, wherein the nuclear transfer unit is activated by exposure to ionomycin and dimethylaminopurine (DMAP).
- 44. (Previously presented) The method of Claim 36, wherein the activated nuclear transfer unit is cultured to obtain a multicellular nuclear transfer unit comprising about 50 cells.
- 45. (Previously presented) The method of Claim 36, wherein step (v) comprises culturing cells comprising the inner portion of the nuclear transfer unit on a feeder layer.

- 46. (Previously presented) The method of Claim 45, wherein the feeder layer comprises fibroblasts.
- 47. (Previously presented) The method of Claim 46, wherein the feeder layer comprises mouse embryonic fibroblasts.
- 48. (Previously presented) Isolated proliferating cells having human nuclear DNA and bovine-derived mitochondria obtained according to the method of Claim 36.
- 49. (Previously presented) Isolated proliferating cells having human nuclear DNA and bovine-derived mitochondria obtained according to the method of Claim 39.
- 50. (Previously presented) Isolated proliferating cells having human nuclear DNA and bovine-derived mitochondria obtained according to the method of Claim 46.
- 51. (Previously presented) A method of producing embryonic-derived, proliferating cells having human nuclear DNA and bovine-derived mitochondria comprising the following steps:
 - (i) enucleating a bovine oocyte;
- (ii) inserting a human epithelial cell nucleus into the bovine oocyte under conditions suitable for the formation of a nuclear transfer unit;
 - (iii) activating the resultant nuclear transfer unit;

- (iv) culturing the activated nuclear transfer unit to obtain a nuclear transfer unit having at least 16 cells; and
- (v) culturing cells comprising the inner portion of the nuclear transfer unit of step (iv) in vitro on a feeder layer of mouse embryonic fibroblasts to obtain cells proliferating as a colony.
- 52. (Previously presented) Isolated proliferating cells having human nuclear DNA and bovine-derived mitochondria obtained according to the method of Claim 51.